

AMENDMENTS TO THE CLAIMS:

The following listing of claims will replace all prior versions and listings of claims in the application. This claim listing reflects a present amendment of patent claim 7, previous amendments to patent claims 8, 11, 12, and 18, and the previous addition of claims 33-69 and 78-91.

1. A unit for packaging and dispensing a liquid or semi-liquid product, comprising:

a body forming a reservoir for the product and having a fixed portion surmounting the reservoir;

a pump surmounting the reservoir;

an actuating element mounted for actuating the pump; and

a product outlet element having at least one opening and connected to the pump by a conduit forming a flexible connection, wherein the outlet element is held substantially immovably in position on the fixed portion of the body, and wherein the actuating element is mounted independent of said fixed portion of the body, wherein the body has a transverse partition separating a first space defining said reservoir from a second space surmounting the first space, said second space containing said pump mounted in said partition, the actuating element mounted on said pump, the outlet element and the conduit forming the flexible connection, wherein the second space has an end opposite said partition, further comprising a protective element closing said end, wherein at least one portion of said protective element is engagable with the actuating element and is formed by a flexible material to permit actuating said actuating element through said protective element.

2. A packaging and dispensing unit according to claim 1, further comprising an outer shell covering said unit substantially over its whole height, wherein the protective element has a body in the form of a rigid or semi-rigid annular part, said protective element being held on the end of the second space via said outer shell, further comprising an opening in said outer shell at a location corresponding to the outlet element, wherein the outer shell has a top with a cutout aligned with the actuating element.

3. A packaging and dispensing unit according to claim 2, further comprising marking elements on at least one of the outer shell and the body to permit proper angular positioning of the outer shell relative to the body.

4. A packaging and dispensing unit according to claim 2, wherein the rigid or semi-rigid annular part of the protective element has a tab portion including a free end bearing on the outlet nozzle so as to fix the latter at a bottom of the cutout in the second space.

5. A packaging and dispensing unit according to claim 2, wherein the shell is self-tightening on the body of the unit, at least in a vicinity of an end of the first space opposite the partition.

6. A packaging and dispensing unit according to claim 1, wherein the protective element is formed by duplicate injection molding two compatible materials, a first rigid or semi-rigid material forming the annular part, a second flexible material forming the portion engagable with the actuating element.

7. (Amended) A packaging and dispensing unit according to claim 6, wherein the first material is one of a polypropylene (PP) and a high density polyethylene (HDPE), and wherein the second material consisting of [SEBS] styrene-ethylene butadiene.

8. (Amended) A unit for packaging and dispensing a liquid or semi-liquid product, comprising:

a body forming a reservoir for the product and having a fixed portion surmounting the reservoir;

a pump surmounting the reservoir;

an actuating element mounted for actuating the pump; and

a product outlet element having at least one opening and connected to the actuating element by a conduit forming a flexible connection, wherein the outlet element is held substantially immovably in position on the fixed portion of the body, wherein the pump is offset relative to an axis of the body and in a direction such that an axis of the pump is farther from the product outlet element than is the axis of the body,

wherein the body has a transverse partition separating a first space defining said reservoir from a second space surmounting the first space, said second space

containing said pump mounted in said partition, the actuating element mounted on said pump, the outlet element and the conduit forming the flexible connection.

9. A packaging and dispensing unit according to claim 8, wherein the outlet element comprises a nozzle for spraying a liquid product.

Cancel claim 10.

11. (Amended) A packaging dispensing unit according to claim [10] 8, wherein the first space has an end opposite to said partition, further comprising an attacked bottom sealingly mounted to said end.

12. (Amended) A packaging and dispensing unit according to claim [10] 8, wherein said actuating element has an internal duct opening to the conduit forming said flexible connection, wherein the pump includes an intake tube opening inside the first space and a hollow outlet stem, the hollow outlet stem having a flexible end opening in the second space, and the actuating element being mounted on the flexible end, and wherein the outlet stem communicates with said internal duct.

13. A packaging and dispensing unit according to claim 12, wherein the outlet element is situated substantially at the same axial level as said flexible end of the outlet stem.

14. A packaging and dispensing unit according to claim 8, wherein the conduit forming said flexible connection forms a bellows.

15. A packaging and dispensing unit according to claim 8, wherein the body is formed of a single piece.

16. A packaging and dispensing unit according to claim 8, wherein the body is a molded thermoplastic material taken from one of the group consisting of a polypropylene (PP) and polyethylene terephthalate (PET).

17. A packaging and dispensing unit according to claim 8, wherein the product is one of a pharmaceutical dermo-pharmaceutical and cosmetic product.

18. (Amended) A unit for packaging and dispensing a liquid or semi-liquid product, comprising:

a body forming a reservoir for the product and having a fixed portion surmounting the reservoir;

a pump surmounting the reservoir;

an actuating element mounted for actuating the pump; and

an outlet nozzle having at least one opening and connected to the pump by a conduit forming a flexible connection, wherein the outlet nozzle is held substantially immovably in position on the fixed portion of the body, wherein the actuating element is mounted independent of said fixed portion of the body, wherein the body has a

transverse partition separating a first space from a second space, wherein the outlet nozzle is disposed substantially immovably at the bottom of a cutout formed in a side wall of the second space, said cutout opening out on a free edge of the second space situated opposite the transverse partition.

19. A unit for packaging and dispensing a liquid or semi-liquid product, comprising:

a body forming a reservoir for the product and having a fixed portion surmounting the reservoir;

a pump surmounting the reservoir;

an actuating element mounted for actuating the pump; and

a product outlet element having at least one opening and connected to the pump by a conduit forming a flexible connection, wherein the outlet element is held substantially immovably in position on the fixed portion of the body, wherein the actuating element is mounted independent of said fixed portion of the body, wherein the outlet element is mounted inside a housing communicating with the conduit forming the flexible connection, wherein the actuating element, the housing and the flexible conduit form a single molded part.

20. A packaging and dispensing unit according to claim 19, wherein the actuating element has a pressing surface on which an actuating pressure may be exerted.

21. A packaging and dispensing unit according to claim 19, wherein the molded part is formed of one of the group consisting of a low density polyethylene (PEBD), and a mixture of low density polyethylene (PEBD)/high density polyethylene (PEHD) wherein a PEHD content is at most equal to 25% of the mixture.

22. A unit for packaging and dispensing a liquid or semi-liquid product, comprising:

a body forming a reservoir for the product and having a fixed portion surmounting the reservoir;

a pump surmounting the reservoir;

an actuating element mounted for actuating the pump; and

a product outlet element having at least one opening and connected to the pump by a conduit forming a flexible connection, wherein the outlet element is held substantially immovably in position on the fixed portion of the body, and wherein the actuating element is mounted independent of said fixed portion of the body, wherein the body has a transverse partition separating a first space defining said reservoir from a second space surmounting the first space, said second space containing said pump mounted in said partition, the actuating element mounted on said pump, the outlet element and the conduit forming the flexible connection, wherein the first space has an end opposite to said partition, further comprising an attached bottom sealingly mounted to said end, wherein the attached bottom has an opening for filling the reservoir, further comprising an obturating element for obturating said opening.

23. A packaging and dispensing unit according to claim 22, wherein the attached bottom is made of a thermoplastic material chosen from one of polypropylenes (PP), polybutylene terephthalates (PBT) and high density polyethylenes (HDPE).

24. A unit for packaging and dispensing a liquid or semi-liquid product, comprising:

a body forming a reservoir for the product and having a fixed portion surmounting the reservoir;

a pump surmounting the reservoir;

an actuating element mounted for actuating the pump; and

a product outlet element having at least one opening and connected to the pump by a conduit forming a flexible connection, wherein the outlet element is held substantially immovably in position on the fixed portion of the body, and wherein the actuating element is mounted independent of said fixed portion of the body, wherein the body has a transverse partition separating a first space defining said reservoir from a second space surmounting the first space, said second space containing said pump mounted in said partition, the actuating element mounted on said pump, the outlet element and the conduit forming the flexible connection, wherein the first space has an end opposite to said partition, further comprising an attached bottom sealingly mounted to said end, wherein said attached bottom forms at least two axially offset sealing zones.

25. A packaging and dispensing unit according to claim 24, wherein said at least two sealing zones comprise a first sealing zone formed by at least one catch engagement bead, and a second sealing zone formed by a self-tightening mounting.

26. A packaging and dispensing unit according to claim 25, further comprising a third sealing zone between the first and second sealing zones, said third sealing zone comprising an O-ring disposed at a bottom of a groove in a side wall of the attached bottom.

27. A packaging and dispensing unit according to claim 26, wherein the O-ring is made of one of butyl and EPDM.

28. A unit for packaging and dispensing a liquid or semi-liquid product, comprising:
a body forming a reservoir for the product and having a fixed portion surmounting the reservoir;
a pump surmounting the reservoir;
an actuating element mounted for actuating the pump; and
a product outlet element having at least one opening and connected to the actuating element by a conduit forming a flexible connection, wherein the outlet element is held substantially immovably in position on the fixed portion of the body, wherein the actuating element is mounted to the pump independent of said fixed portion of the body, and wherein the pump is offset relative to an axis of the body and in a direction such

that an axis of the pump is farther from the product outlet element than is the axis of the body.

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30. A unit for packaging and dispensing liquid or semi-liquid product, comprising:
a container forming a reservoir for the product;
a wall extending above and in fixed position with respect to said container;
a pump mounted to a top of said container;
a product outlet element held substantially immovably in position with respect to
said wall; and
a conduit forming a flexible connection between said pump and said outlet
element,
wherein said pump is offset relative to an axis of said container and in a direction
such that an axis of said pump is farther from said product outlet element than is the
axis of said container,
wherein said wall defines a space above said reservoir having an open end
opposite said reservoir, said container having a traverse partition separating said
reservoir from said space, said space containing a portion of said pump, said outlet
element, and said conduit.

31. A packaging and dispensing unit according to claim 30, wherein said outlet
element comprises a nozzle for spraying a liquid product.

Cancel claim 32.

33. A packaging and dispensing unit according to claim 30, wherein said container has an end opposite to said partition, further comprising an attached bottom sealingly mounted to said end of said container.

34. A packaging and dispensing unit according to claim 30, wherein said pump includes an actuating element for operating said pump, said actuating element having an internal duct opening to said conduit, wherein said pump includes an intake tube opening inside the container and a hollow outlet stem, said hollow outlet stem having an end coupled to said duct of said actuating element.

35. A packaging and dispensing unit according to claim 34, wherein said outlet element is situated substantially at the same level as said end of said outlet stem.

36. A packaging and dispensing unit according to claim 30, wherein said conduit forming the flexible connection forms a bellows.

37. A packaging and dispensing unit according to claim 30, wherein said container and said wall are formed of a single piece.

38. A packaging and dispensing unit according to claim 30, wherein said container and said wall are formed from a molded thermoplastic material chosen from polypropylene (PP) and polyethylene terephthalate (PET).

39. A packaging and dispensing unit according to claim 30, further comprising the product, wherein the product is one of a pharmaceutical, dermo-pharmaceutical, and cosmetic product.

40. A packaging and dispensing unit according to claim 30, wherein said pump includes an actuating element.

41. A packaging and dispensing unit according to claim 30, wherein said conduit extends from said pump to said outlet element.

42. A packaging and dispensing unit according to claim 30, wherein said outlet element is connected to said wall.

43. A unit for packaging and dispensing liquid for semi-liquid product, comprising:

a body having a lower portion and an upper portion fixed with respect to said lower portion;

a reservoir for the product, said reservoir being in said lower portion of said body; a pump located at a top of said reservoir;

a product outlet element held substantially immovably in position with respect to said upper portion of said body; and

a conduit forming a flexible connection between said pump and said outlet element,

wherein said pump is offset relative to an axis of said body and in a direction such that an axis of said pump is farther from said product outlet element than is the axis of said body.

44. A packaging and dispensing unit according to claim 43, wherein said lower portion of said body forms said reservoir.

45. A packaging and dispensing unit according to claim 43, wherein said outlet element comprises a nozzle for spraying a liquid product.

46. A packaging and dispensing unit according to claim 43, wherein said body has a partition wall separating said lower portion from said upper portion.

47. A packaging and dispensing unit according to claim 43, wherein said pump includes an actuating element for operating said pump.

48. A packaging and dispensing unit according to claim 43, wherein said conduit extends from said pump to said outlet element.

49. A packaging and dispensing unit according to claim 47, wherein said actuating element has an internal duct opening to said conduit, wherein said pump includes an intake tube opening inside the reservoir and a hollow outlet stem, and wherein said hollow outlet stem has an end coupled to said duct of said actuating element.

50. A packaging and dispensing unit according to claim 49, wherein said outlet element is situated substantially at the same level as said end of said outlet stem.

51. A packaging and dispensing unit according to claim 43, wherein said lower portion and said upper portion are formed of a single piece.

52. A packaging and dispensing unit according to claim 43, further comprising the product, wherein the product is one of a pharmaceutical, dermo-pharmaceutical, and cosmetic product.

53. A packaging and dispensing unit according to claim 43, wherein said outlet element is connected to said upper portion.

54. A packaging and dispensing unit according to claim 43, wherein said pump is mounted to said body.

55. A unit for packaging and dispensing liquid or semi-liquid product, comprising:

a body;

a reservoir in said body;

a pump located at a top of said reservoir;

a product outlet element substantially immovably fixed with respect to said body;

and

a conduit forming a flexible connection between said pump and said outlet
element,

wherein said pump is offset relative to an axis of said body and in a direction
such that an axis of said pump is farther from said product outlet element than is the
axis of said body.

56. A packaging and dispensing unit according to claim 55, wherein said body
forms said reservoir.

57. A packaging and dispensing unit according to claim 55, wherein said outlet
element comprises a nozzle for spraying a liquid product.

58. A packaging and dispensing unit according to claim 55, wherein said body
has a partition wall separating a lower portion of the body from an upper portion of the
body.

59. A packaging and dispensing unit according to claim 55, wherein said pump
includes an actuating element for operating said pump.

60. A packaging and dispensing unit according to claim 55, wherein said conduit extends from said pump to said outlet element.

61. A packaging and dispensing unit according to claim 59, wherein said actuating element has an internal duct opening to said conduit, wherein said pump includes an intake tube opening inside the reservoir and a hollow outlet stem, and wherein said hollow outlet stem has an end coupled to said duct of said actuating element.

62. A packaging and dispensing unit according to claim 61, wherein said outlet element is situated substantially at the same level as said end of said outlet stem.

63. A packaging and dispensing unit according to claim 55, wherein said body has an lower portion and an upper portion, wherein the reservoir is in the lower portion.

64. A packaging and dispensing unit according to claim 63, wherein said outlet element is connected to said upper portion.

65. A packaging and dispensing unit according to claim 64, wherein said upper portion includes a wall and wherein said outlet element is connected to said wall.

66. A packaging and dispensing unit according to claim 63, wherein said lower portion and said upper portion are formed of a single piece.

67. A packaging and dispensing unit according to claim 55, further comprising the product, wherein the product is one of a pharmaceutical, dermo-pharmaceutical, and cosmetic product.

68. A packaging and dispensing unit according to claim 55, wherein said pump is mounted to said body.

69. A packaging and dispensing unit according to claim 55, wherein said outlet element is substantially immovably fixed with respect to said reservoir.

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78. A unit for packaging and dispensing a liquid or semi-liquid product, comprising:
a container forming a reservoir for the product;
a wall extending above and in fixed position with respect to said container, said wall defining a space above said reservoir having an open end opposite said reservoir;
a pump mounted to a top of said container, said pump including an actuating element, mounted independent of said wall and said container, for operating said pump;
a product outlet element held substantially immovable with respect to said wall;

a conduit forming a flexible connection between said pump and said outlet element; and
a protective element closing said open end of said space defined by said wall,
wherein at least one portion of said protective element is engagable with said actuating
element and is formed by a material sufficiently flexible to permit operation of said
actuating element through said protective element.

79. A packaging and dispensing unit according to claim 78, further comprising
an outer shell covering said unit substantially over its whole height, wherein said
protective element has a body in the form of a rigid or semi-rigid annular part, said
protective element being held on the end of the space via said outer shell, and wherein
said shell has an opening in said outer shell at a location corresponding to the outlet
element, wherein said outer shell has a top with a cutout aligned with said actuating
element.

80. A packaging and dispensing unit according to claim 79, further comprising
marking elements on at least one of said outer shell and said container to permit proper
angular positioning of said outer shell relative to said container.

81. A packaging and dispensing unit according to claim 79, wherein the rigid or
semi-rigid annular part of said protective element has a tab portion including a free end
bearing on said outlet element so as to fix said outlet element at a bottom of a cutout in
said wall.

82. A packaging and dispensing unit according to claim 79, wherein said shell is self-tightening on said container, at least in a vicinity of an end of said container opposite said pump.

83. A unit for packaging and dispensing a liquid or semi-liquid product, comprising:

a container forming a reservoir for the product;
a wall extending above and in fixed position with respect to said container;
a pump mounted to a top of said container;
an actuating element mounted for actuating the pump; and
an outlet nozzle having at least one opening and being flow connected to said pump by a conduit forming a flexible connection, wherein said outlet nozzle is held substantially immovably in position with respect to said wall, wherein said actuating element is mounted independent of said wall and said container, wherein said outlet nozzle is disposed substantially immovably at the bottom of a cutout formed in said wall, said cutout opening out on a free edge of said wall situated opposite said container.

84. A unit for packaging and dispensing a liquid or semi-liquid product, comprising:

a container forming a reservoir for the product;
a wall extending above and in fixed position with respect to said container;

a pump mounted to a top of said container, said pump including an actuating element mounted for actuating said pump; and
a product outlet element having at least one opening and being flow connected to said pump by a conduit forming a flexible connection, wherein said outlet element is held substantially immovably in position with respect to said wall, wherein said actuating element is mounted independent of said wall and said container, and wherein said actuating element, said outlet element, and said flexible conduit form a single molded part.

85. A packaging and dispensing unit according to claim 84, wherein said actuating element has a pressing surface on which an actuating pressure may be exerted.

86. A unit for packaging and dispensing a liquid or semi-liquid product, comprising:
a container forming a reservoir for the product;
a wall extending above and in fixed position with respect to said container;
a pump mounted to a top of said container, and pump including an actuating element mounted for actuating said pump; and

a product outlet element having at least one opening and being flow connected to said pump by a conduit forming a flexible connection, wherein said outlet element is held substantially immovably in position with respect to said wall, and wherein said actuating element is mounted independent of said container and said wall, wherein said

container has an end opposite to said pump, and wherein said unit further comprises an attached bottom sealingly mounted to said end, wherein said attached bottom has an opening for filling said reservoir, further comprising an obturating element for obturating said opening.

87. A unit for packaging and dispensing a liquid or semi-liquid product, comprising:

a container forming a reservoir for the product;
a wall extending above and in fixed position with respect to said container;
a pump mounted to a top of said container, said pump including an actuating element mounted for actuating said pump; and
a product outlet element having at least one opening and being flow connected to said pump by a conduit forming a flexible connection, wherein said outlet element is held substantially immovably in position with respect to said wall, and wherein said actuating element is mounted independent of said container and said wall,
wherein said container has an end opposite to said pump, and wherein said unit further comprises an attached bottom sealingly mounted to said end, wherein said attached bottom forms at least two axially offset sealing zones.

88. A packaging and dispensing unit according to claim 87, wherein said at least two sealing zones comprise a first sealing zone formed by at least one catch engagement bead, and a second sealing zone formed by a self-tightening mounting.

89. A packaging and dispensing unit according to claim 88, further comprising a third sealing zone between the first and second zones, said third zone comprising an O-ring disposed at a bottom of a groove in a side wall of said attached bottom.

90. A unit for packaging and dispensing a liquid or semi-liquid product, comprising:

a container forming a reservoir for the product;
a wall extending above and in fixed position with respect to said container;
a pump mounted to a top of said container, said pump including an actuating element mounted for actuating the pump; and
a product outlet element having at least one opening and being flow connected to the actuating element by a conduit forming a flexible connection, wherein said outlet element is held substantially immovably in position with respect to said wall, wherein said actuating element is mounted to said pump independent of said container and said wall, and wherein said pump is offset relative to an axis of said container and in a direction such that an axis of said pump is farther from said product outlet element than is the axis of said container.

91. A unit for packaging and dispensing a liquid or semi-liquid product, comprising:

a container forming a reservoir for the product;
a wall extending above and in fixed position with respect to said container;

a pump mounted to a top of said container, said pump including an actuating element mounted for actuating said pump; and
a product outlet element having at least one opening and being flow connecting to the actuating element by a conduit forming a flexible connection, wherein said outlet element is held substantially immovably in position with respect to said wall, wherein said actuating element, upon actuation of said pump, moves axially with respect to said wall, and wherein said pump is offset relative to an axis of said container and in a direction such that an axis of said pump is farther from said product outlet element than is the axis of said container.